

WHAT IS CLAIMED IS:

1. A network device, comprising:

- a) a converter operable to convert a packet data stream to a public switched telephone network data stream; and
- b) a controller operable to:
 - i) send signals in the public switched telephone network data stream identifying the network device as a packet device;
 - ii) receive signals indicating at least one other network devices are participating in a public switched transmission session with the network device; and
 - iii) send the packet data stream across the public switched transmission network directly to the at least one other network device.

2. The network device of claim 1, wherein the network device is a voice gateway.

3. The network device of claim 1, wherein the packet data stream further comprises coded voice.

4. The network device of claim 1, wherein the packet data stream further comprises data.

5. The network device of claim 1, wherein the converter further comprises a voice coder/decoder.

6. The network device of claim 1, wherein the converter further comprises a modem.

7. The network device of claim 1, wherein the controller uses ITU V.8 protocols.

8. The network device of claim 1, wherein the controller uses robbed-bit signaling.

9. The network device of claim 1, wherein the controller is a processor configured to execute all control operations.

10. The network device of claim 1, wherein the controller further comprises more than one integrated circuit.

11. A network device, comprising:

- a) a means for converting a packet data stream to a public switched transmission network data stream; and
- b) a means for controlling the network device, wherein controlling the network device includes:
 - i) sending signals in the public switched telephone network data stream identifying the network device as a packet device;
 - ii) receiving signals indicating at least one other network devices are participating in a public switched transmission session with the network device; and

iii) sending the packet data stream across the public switched transmission network directly to the at least one other network device.

12. A method of transmitting a packet data stream across a public switched telephone network, the method comprising:

- a) establishing a communication session between a first network device and other devices across a public switched telephone network by transmission of a public switched telephone network data stream;
- b) using transmission of identifying signals to identify at least one other network device participating in the communication session; and
- c) altering the communication session between the first network device and the at least one other network device to transmit a packet data stream.

13. The method of claim 12, wherein establishing a communication session further comprises dialing out of a packet domain to a public switched telephone network domain.

14. The method of claim 12, wherein using transmission of identifying signals further comprises transmitting signals in accordance with ITU Recommendation V.8.

15. The method of claim 12, wherein altering the communication session further comprises eliminating a conversion through a voice coder/decoder.

16. The method of claim 12, wherein altering the communication session further comprises eliminating a conversion through a modem.

17. The method of claim 12, wherein the method further comprises:

- a) gathering information on the at least one other network device; and
- b) storing the information for future use.

18. The method of claim 17, wherein using transmission of identifying signals further comprises:

- a) accessing a storage of known network devices based upon the identifying signals;
- b) locating information about the at least one other network device; and
- c) using that information in altering the communication session.

19. The method of claim 12, wherein using transmission of identifying signals further comprises the first network device sending the identifying signals.

20. The method of claim 12, wherein using transmission of identifying signals further comprises the first network device receiving and responding to identifying signals sent by another network device.

21. A computer-readable medium including software code that, when executed, results in:

- a) establishment of a communication session between a first network device and other devices across a public switched telephone network by transmission of a public switched telephone network data stream;
- b) use of identifying signals to identify at least one other network device participating in the communication session; and
- c) alteration of the communication session between the first network device and the at least one other network device to transmit a packet data stream.

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